

## Research Engineer (Mechanical Engineering) - AG5 Singapore Institute of Technology

Direct Link: <https://www.AcademicKeys.com/r?job=236182>

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Posted May 16, 2024, set to expire Sep. 15, 2024

**Job Title** Research Engineer (Mechanical Engineering) - AG5

**Department** Engineering

**Institution** Singapore Institute of Technology  
Singapore, , Singapore

**Date Posted** May 16, 2024

**Application Deadline** Open until filled

**Position Start Date** Available immediately

**Job Categories** Research Scientist/Associate

**Academic Field(s)** Mechanical Engineering

**Job Website** <https://careers.singaporetech.edu.sg/cw/en/job/498675/research-engineer-mechanical-engineering-ag5>

**Apply By Email**

**Job Description**

## Research Engineer (Mechanical Engineering) - AG5

**Job no:** 498675

**Department:** Engineering

**Contract type:** Contract

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As a University of Applied Learning, SIT works closely with industry in our research pursuits. Our research staff will have the opportunity to be equipped with applied research skill sets that are relevant

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to industry demands while working on research projects in SIT.

### **About the project:**

Difficulties in swallowing or chewing affect millions worldwide, especially amongst the elderly. We have recently been awarded a research project to develop transitional foods which can make a positive impact on the quality of life for those with swallowing difficulties. The project includes two new research positions that will work closely together with each other and with the multidisciplinary team of project investigators. We invite outstanding and talented candidates who are passionate about foods and have a strong desire to develop or enhance their R&D competencies to apply for these positions.

The primary role of this position is in the area of mechanical testing and characterisation, encompassing both experimental work as well as theoretical and finite element simulations. The position requires a strong aptitude in materials engineering, solid and fracture mechanics as well as 3D CAD and finite element modelling.

### **Key Responsibilities:**

- Participate in and manage the research project with Principal Investigator (PI), Co-PI and the research team members to ensure all project deliverables are met.
- Undertake these key responsibilities in the project:
  - i. Design appropriate mechanical tests that relate to food break down in the mouth
  - ii. Conduct materials testing to characterise the mechanical behaviour of the foods
  - iii. Develop and perform finite element simulations, based on micromechanical and macroscopic properties
- Document, publish and present research findings
- Carry out Risk Assessment, and ensure compliance with Work, Safety and Health Regulations.
- Coordinate procurement and liaison with vendors/suppliers.

### **Job Requirements:**

- A Degree in mechanical engineering or a related discipline, with a proven record of peer-reviewed publications in the area of mechanical testing and numerical modelling
- Passion for developing and analysing the behaviour of foods
- Evidence of strong knowledge and interest in solid mechanics, materials characterization, 3D CAD

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and finite element modelling

- Evidence of ability to lead, manage and perform research independently as well as in a group

### Key Competencies:

- Strong experimentation skills and theoretical knowledge in mechanical engineering.
- Able to work independently as well as to maintain strong working relationships with people within and external to the university.
- Show strong initiative and sense of responsibility
- Proficient in technical writing and presentation
- Possess a high degree of self-motivation and curiosity in technical pursuits, with the ability to develop original ideas
- Possess a desire to develop new engineering solutions to help the society

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**Advertised:** 16 May 2024 Singapore Standard Time

**Applications close:** 31 Dec 2024 Singapore Standard Time

### Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

### Contact

Singapore